README file – Project 2

Phase 2

Implementation –

The APIs and technology involved for the implementation are as mentioned –

* Python using Flask for the web UI
* Docker toolbox that helps setup container using VirtualBox

Code flow –

NOTE:

* The application is transferred to the Docker with NGINX support. You can access the UI at <http://127.0.0.1:8081>
* Port is set at 8081 to avoid any port conflict with other services.
* Always start Docker before starting localhost, you can do this by starting Docker Quickstart Terminal, once it has finished with the setup, the localhost can be started.
* The application allows a user to be both publisher and subscriber.

Directory structure for the codebase –

Steps to execute –

* Open terminal and change directory to *web*
* Run the following commands –
  + docker build -t pub\_sub .
  + docker run -p 8081:8081 -t pub\_sub
* Open browser at <http://192.168.99.100:8081> (docker-ip:8081)

Working application screenshots –

|  |
| --- |
|  |
| Landing page1 |
|  |
| Landing page2 |
|  |
| Landing page3 |
|  |
| Main page(User:ankita): Publisher(TV Shows)-Subscriber(Gadgets) |
|  |
| Main page(User:kushagra): Publisher(Football)-Subscriber(Gadgets, TV Shows) |
|  |
| Main page(User:anon): Publisher(Gadgets)-Subscriber(TV Shows, Football) |
|  |
| Notify Subscriber for any published data for subscribed topic |

Logs –

*C:\Users\ankim\Downloads\DS\_P2\_2\web>docker build -t pub\_sub .*

*Sending build context to Docker daemon 173.1kB*

*Step 1/7 : FROM tiangolo/uwsgi-nginx-flask:flask*

*flask: Pulling from tiangolo/uwsgi-nginx-flask*

*...*

*Digest: sha256:2202e90388592074ce03775e9b7a55cb83dbfa59726be83570a584fd03c46d21*

*Status: Downloaded newer image for tiangolo/uwsgi-nginx-flask:flask*

*---> c32490ab29e8*

*Step 2/7 : COPY . /app*

*---> 1a4e7229dd68*

*Step 3/7 : WORKDIR /app*

*---> Running in 4f738cc9dc0d*

*Removing intermediate container 4f738cc9dc0d*

*---> ec259201c6be*

*Step 4/7 : RUN pip install -r requirements.txt*

*---> Running in b3e89f527770*

*Requirement already satisfied: flask in /usr/local/lib/python2.7/site-packages (from -r requirements.txt (line 1)) (1.0.2)*

*Collecting flask\_restful (from -r requirements.txt (line 2))*

*...*

*Installing collected packages: aniso8601, pytz, six, flask-restful*

*Successfully installed aniso8601-4.0.1 flask-restful-0.3.6 pytz-2018.7 six-1.11.0*

*Removing intermediate container b3e89f527770*

*---> 87932111fa89*

*Step 5/7 : EXPOSE 8081*

*---> Running in 530498160e2c*

*Removing intermediate container 530498160e2c*

*---> 6bdc7fbf35f2*

*Step 6/7 : ENTRYPOINT ["python"]*

*---> Running in 12917b6e394f*

*Removing intermediate container 12917b6e394f*

*---> a2a981edb4df*

*Step 7/7 : CMD ["app.py"]*

*---> Running in 9e37fc92c7fe*

*Removing intermediate container 9e37fc92c7fe*

*---> 2088b67135d1*

*Successfully built 2088b67135d1*

*Successfully tagged pub\_sub:latest*

*SECURITY WARNING: You are building a Docker image from Windows against a non-Windows Docker host. All files and directories added to build context will have '-rwxr-xr-x' permissions. It is recommended to do*

*uble check and reset permissions for sensitive files and directories.*

*C:\Users\ankim\Downloads\DS\_P2\_2\web>docker run -p 8081:8081 -t pub\_sub*

*\* Serving Flask app "app" (lazy loading)*

*...*

*192.168.99.1 - - [11/Nov/2018 03:46:50] "GET / HTTP/1.1" 200 -*

*192.168.99.1 - - [11/Nov/2018 03:46:50] "GET /static/image.jpg HTTP/1.1" 200 -*

*192.168.99.1 - - [11/Nov/2018 03:46:50] "GET /favicon.ico HTTP/1.1" 404 -*

*192.168.99.1 - - [11/Nov/2018 03:46:52] "GET / HTTP/1.1" 200 -*

*192.168.99.1 - - [11/Nov/2018 03:46:52] "GET /static/image.jpg HTTP/1.1" 200 -*

*192.168.99.1 - - [11/Nov/2018 03:46:52] "GET /favicon.ico HTTP/1.1" 404 -*

*192.168.99.1 - - [11/Nov/2018 03:46:54] "GET / HTTP/1.1" 200 -*

*192.168.99.1 - - [11/Nov/2018 03:46:54] "GET /static/image.jpg HTTP/1.1" 200 -*

*192.168.99.1 - - [11/Nov/2018 03:46:54] "GET /favicon.ico HTTP/1.1" 404 -*

*ankita*

*192.168.99.1 - - [11/Nov/2018 03:47:02] "POST / HTTP/1.1" 200 -*

*kushagra*

*192.168.99.1 - - [11/Nov/2018 03:47:12] "POST / HTTP/1.1" 200 -*

*anon*

*192.168.99.1 - - [11/Nov/2018 03:47:26] "POST / HTTP/1.1" 200 -*

*{'Gadgets': False, 'Movies': False, 'World News': False, 'Football': False, 'TV Shows': True}*

*192.168.99.1 - - [11/Nov/2018 03:48:07] "POST / HTTP/1.1" 200 -*